

REMARKS

Claims 1-8 have been rejected and remain pending. New claim 14 has been added. Favorable reconsideration of the application in view of the following remarks is respectfully requested.

Rejection Of Claims 1-4 and 6-8 Under 35 U.S.C. §103(a):

Claims 1-4 and 6-8 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kasahara et al. (EP 1002660) in view of Brown (US2002/0086909), Akiya et al. (5,041,328) and Darsillo et al. (6,365,264). The Examiner states that the primary reference discloses an ink jet recording paper having a support and an ink absorptive layer including binder, fine particles, and a cationic polymer (see the Abstract). The Examiner notes that the particles may be alumina and have an average primary particle diameter of not more than 30 nm with secondary aggregated particles of not more than 200nm (see p. 5, lines 30-47); the binder may be polyvinyl alcohol (see page 11, lines 43-50); and the hardener may be included in ratios to binder of between 5 and 500 mg per g binder (page 12, lines 15-35).

The Examiner concedes that the primary reference does not specifically disclose the use of fumed alumina. The Examiner states, however, that the secondary references each teach the use of fumed alumina in recording media (Darsillo et al. at col. 4, line 59 to col. 5, line 2, and col. 5, lines 43-47, col. 9, line 42 (for polyvinyl alcohol binder) to col. 10, line 29 (for hardener), and Tables 10 and 12) (Akiya et al., at col. 9, lines 50-58) and (Brown, at paragraphs 22 and 22 (disclosing fumed alumina and use of the dispersion to form ink jet media). The Examiner states that Darsillo et al. disclose both silica and alumina and that anionically charged particles can be treated to make them anionic. The Examiner further states that, in addition, at column 4, Darsillo et al. indicated that the fumed particles are responsible for providing ink absorption as well as a glossy coating. The Examiner concludes, therefore, it would have been obvious to use a fumed alumina as the alumina of the primary reference.

This rejection is respectfully traversed. As conceded by the Examiner, Kasahara et al. (hereafter "Kasahara") do not disclose the use of fumed alumina. Instead, Kasahara, in paragraphs [0023] and [0024], specifically mentioned fumed

silica, but not fumed alumina. In all the Examples in Kasahara, silica is used, but not fumed alumina, nor even alumina fumed or otherwise. The skilled artisan can readily appreciate that the material surface of fumed alumina is very different from the material surface of fumed silica. Although both are inorganic particles, among many others, such chemical differences as do exist between fumed silica and fumed alumina do matter. The Comparative Examples in the present application demonstrate that the claimed combination provides significant improvement with respect to cracking (Table 2), dry time (Table 3) and coalescence (Table 4).

Turning now to the secondary references. Darsillo involves fumed alumina but not crosslinking in the image-receiving layer (as compared to hardeners in the glossy coating), whereas the present invention is especially directed to the improved results associated with such a combination. Moreover, Darsillo states that among pyrogenic metal oxides that can be used, pyrogenic silica is most preferred. The actual examples of Darsillo employ fumed silica, colloidal silica, or fumed alumina, but importantly, polyvinyl alcohol binder is present *without* crosslinking. Moreover, it should be pointed out that statements in Darsillo, in column 5, referring to the fact that silica which is anionic can be made cationic by treating the silica with one or more inorganic *cationic modifiers*, do not refer to fumed silica. Fumed silica is anionic. In contrast to fumed silica, fumed alumina is cationic.

Regarding the Brown reference, this patent is directed to a method of preparing a fumed metal oxide dispersion. Applicants concede that fumed alumina is known and its use per se in inkjet receivers is known. The presently claimed invention as a whole, however, is directed to its combination with highly crosslinked PVA in the image-receiving layer of an inkjet receiver. This is not remotely taught by Brown alone or in combination with the primary reference.

Rejection Of Claims 1 and 5 Under 35 U.S.C. §103(a):

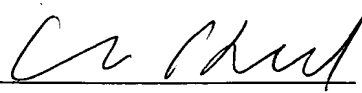
Claims 1 and 5 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Kasahara et al. (EP 1002660) in view of Brown (US2002/0086909), Akiya et al. (5,041,328) and Darsillo et al. (6,365,264) and further in view of Tokunaga et al. (6,403,162). The Examiner states that Tokunaga et al. disclose a similar ink jet recording medium including polyvinyl

alcohol and a hardener in the ink receptive layer (Col. 6, line 49 to col. 7, line 45). The Examiner states that the reference also teaches hardeners for polyvinyl alcohol including aldehydes, boric acids and borates, epoxy hardeners and dihydroxy dioxane. The Examiner alleges that, since the examples of hardeners of the primary reference include many of the same hardeners recited by Tokunaga et al. (i.e. those listed above, excluding the dioxane compound used by Applicant), it would have been obvious to one of ordinary skill in the art to use dihydroxy dioxane as the hardener of the primary reference, because it is taught as an equivalent crosslinking agent for polyvinyl alcohol by the secondary art.

This rejection is traversed for the reasons stated above with respect to the first rejection. Tokunaga does not disclose the use of fumed alumina, but rather fumed silica. Since fumed silica is used, a cationic polymer must also be used (see claim 1 of Tokunaga). In contrast, a cationic polymer or mordant is not required by the present claims and, while optional, in fact, is not used in the examples of the present invention showing unexpectedly superior results.

In view of the foregoing amendments and remarks, reconsideration of this patent application is respectfully requested. A prompt and favorable action by the Examiner is earnestly solicited. Should the Examiner believe any remaining issues may be resolved via a telephone interview, the Examiner is encouraged to contact Applicants' representative at the number below to discuss such issues.

Respectfully submitted,



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